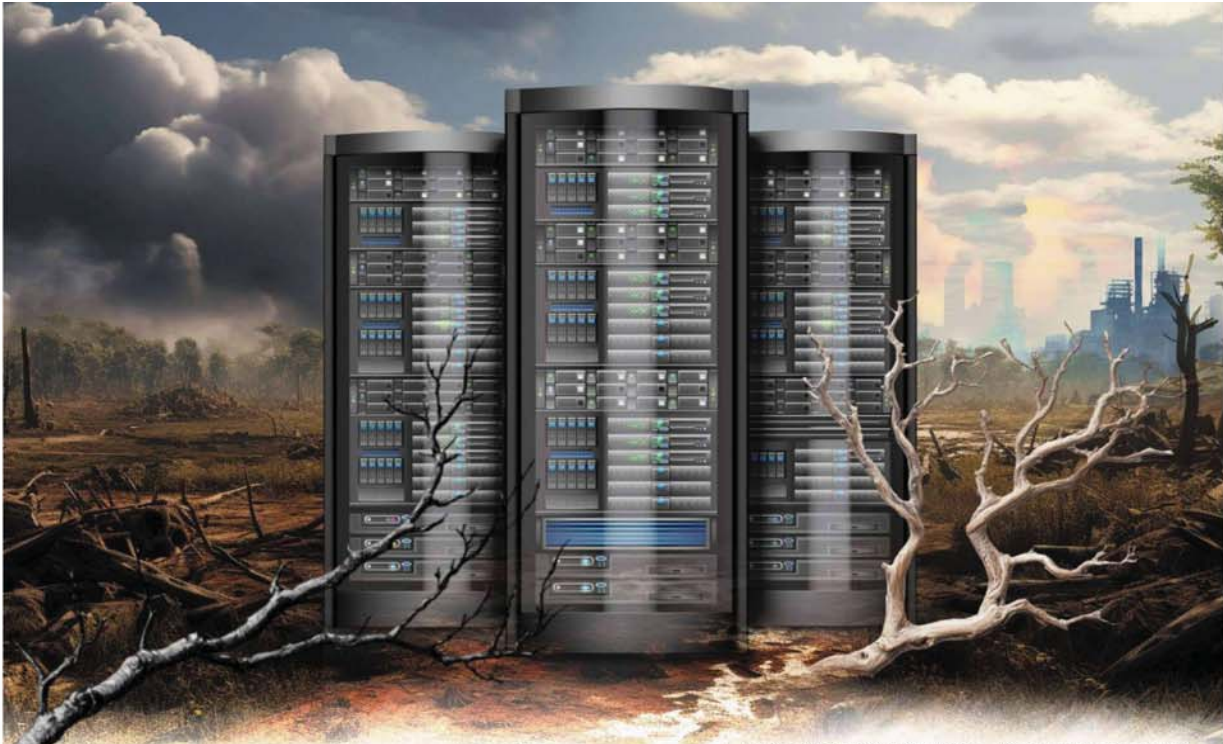


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Sustainability is key

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is **key**

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WITH Malaysia continuing to attract large amounts of data centre investments, the issue of their impact on the environment is getting harder to ignore.

For starters, data centre infrastructure requires a lot of water to function with water-based cooling systems enabling equipment at these facilities to operate at safe temperatures.

These centres which house servers, data storage drives and network equipment typically for big companies like banks, cloud vendors and telcos, also consume huge amounts of electricity, with consumption expected to only increase in years to come.

In the last few years, Malaysia has become a data centre powerhouse in the Asian region, possibly riding on Singapore's 2019 ban on such investments for environmental reasons.

The nation has managed to attract billions of ringgit in data centre investments from tech giants like Nvidia, Google and Microsoft.

Interestingly, Johor Baru, which is just next to Singapore, has been called the fastest growing market in South-East Asia, according to DC Byte's 2024

Global Data Centre Index.

Prior to its moratorium on data centre investments, Singapore was widely known as the data centre hub in the region.

The city-state lifted its curb a few years later but went on to allocate only 80 megawatts (MW) for four new data centres.

Then in May this year, in a move seen as a catch-up effort by regional players, the Singapore government said it would release more capacity of about 300MW.

Granted, the growth for data centres is set to increase further globally, due to demand for cloud computing, artificial intelligence and the like.

The Singapore government has said that the 300MW is part of a roadmap known as the Green Data Centre Roadmap drawn up by the country's Infocomm Media Development Authority.

The roadmap will supposedly allow the country to continue to have its finger in the pie but on a more "sustainable" basis.

Will it have to go down the same road and impose a similar moratorium because of climate issues?

Some field experts seem to think so, if nothing concrete is

■ Success of data centres hinges on sustainability

■ Setting up local manufacturing faculties will create more value

■ Vital to adopt advanced cooling technologies, integrate renewable energy and prioritise water recycling

done now to address the growing concerns.

As it stands, the Cabinet reportedly approved Data Centre Planning Guidelines or GPP in October.

The guidelines are supposed to standardise criteria for the application and approval processes of data centre investments.

National University of Singapore's Energy Studies Institute executive director Prof Lee Poh Seng reckons without proper implementation of guidelines and criteria, Malaysia "may go down Singapore's road".

He reckons sustainability is key to Malaysia's success in this area.

"Data centres are the backbone of our digital future, but their sustainability hinges on how effectively we conserve energy, water and natural resources," he tells *StarBiz* 7.

Pivotal steps

Lee says that in Malaysia, adopting advanced cooling technologies, integrating renewable energy and prioritising water recycling are pivotal steps to align growth with environmental responsibility.

He said conservation isn't just about resource efficiency.

"It's about safeguarding biodiversity and supporting communities. By embedding these principles into our digital infrastructure, we can position Malaysia as a global leader in sustainable and resilient data center operations," Lee adds.

He says a good thing now is, big names like Microsoft tend to be "self-motivated" when it comes to sustainable operations.

"They are already practising sustainability as they have their own reporting to do on this, but it is important that everyone, including local players, adopts such practices."

For Malaysia to create more value from its data centre invest-

ments, Lee says the country should set up its own facilities to manufacture equipment for the centres.

"As it is now, when they announce a RM10bil investment, a huge chunk of that actually goes to paying for equipment which is manufactured overseas, so the real investment value into Malaysia is much less.

"If Malaysia can ensure that the equipment is made locally, it will create more value, in terms of jobs too."

Steven Kang, managing director at Singapore-based energy services company M&V Pte Ltd, reckons artificial intelligence and data centres will be "useless if our climate is in a mess".

The company's energy solutions have been deployed in various locations throughout Asia, including Malaysia and Myanmar.

"The way Malaysia is expanding its data centre business seems unsustainable in the long term, this boom may collapse if nothing is done."

He notes that billions of dollars are being poured into Malaysia to build data centres which are energy and water guzzlers.

"While this may do wonders for Malaysia's economy, it is a big threat to Malaysia as these mega data centres will magnify Malaysia's carbon footprint significantly.

"When climate disasters increase, as most scientists predict, the world might pivot suddenly to a low-carbon economy to placate voters.

"If that happens, Malaysia may have to pay a high price to decarbonise these data centres," Kang says.

He believes a sustainable solution to reap the benefits of data centres is to implement policies that mandate or even reward new and existing data centres to use the most energy-efficient IT and cooling systems available.